SERVICE MANUAL

STEREO TURNTABLE

SANYO

TP X3
(EUROPE)

SPECIFICATIONS

NOTE:
The below mentioned specifications are mainly based on the IHF measurements standard. They can therefore not directly be compared with specifications based on the DIN standard or other standards.

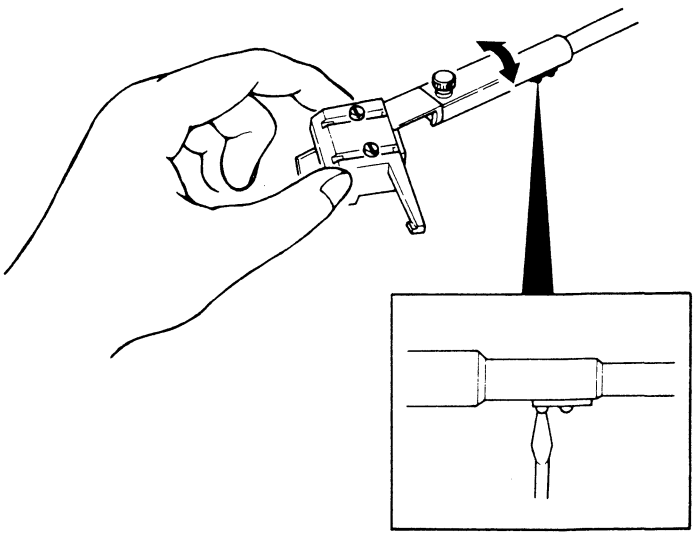
Motor	DC brushless servo motor
Drive system	Direct drive/Full auto
Speed	33-1/3 and 45 rpm
Speed deviation	±3.0%
Wow and flutter	0.05% WRMS
Rumble	67 dB DIN B spec
Turntable platter	313 mm (12-3/8")
Tone arm	Static-balance type
Tracking error	±1.5°
Overhang	15 mm
Cartridge and stylus	Magnetic stereo cartridge (VM type) (No. MG-35D), 0.6 mil diamond stylus (No. ST-35D)
Stylus pressure	1.5 – 2.5 g.
Frequency response	20 – 20,000 Hz
Channel separation	Better than 20 dB
Power source	AC: 220 V, 50 Hz
Power consumption	6 W
Dimensions (Approx.)	440 (W) x 370 (D) x 111 (H) mm
	(17-3/8" x 14-5/8" x 4-3/8")
Weight (Approx.)	5.3 kg (11 lbs. 11 ozs.)

* Specifications and design are subject to change without notice.

ADJUSTMENT OF HEADSHELL

The headshell attached to the tonearm should not be inclined either to the right or to the left. If necessary, loosen the two screws on the bottom of the tubular arm and adjust the headshell. Be sure that the stylus is normal to the record surface.

NOTE: Do not take out these screws.

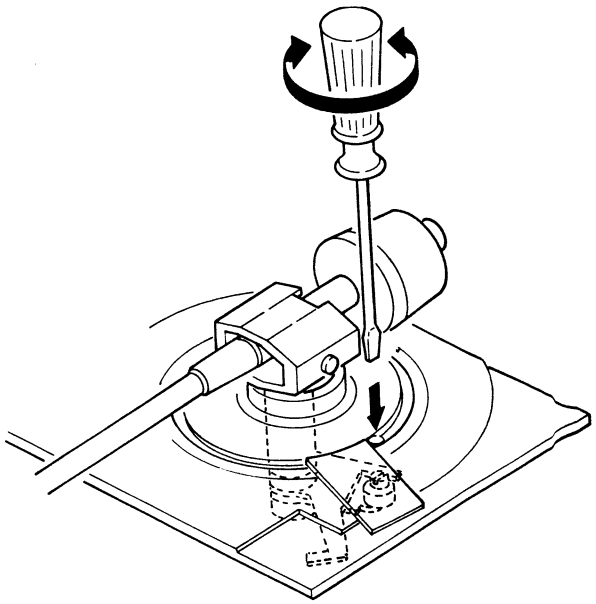


ADJUSTMENT OF TONE ARM SET-DOWN.

When the start/stop (START/STOP) button is pressed to start for the automatic operation, the stylus descends automatically and sets down on the lead-in groove of the record. Though this adjustment has been made properly by the factory, the stylus may set down too far inside or outside of the lead-in groove. Therefore when mounting an alternative cartridge, if this occurs, you can correct as follows:

NOTE: Remove the rubber cap covering the adjustment hole before making the adjustment. Replace it after adjusting.

a. Be sure the overhang and anti-skating force adjustments have been made correctly. Also, check if the cartridge shell has been mounted horizontally to the tone arm.
b. Place a 12" (30 cm) record on the turntable.
c. Set the speed/disc size select (SPEED) button to the "33" position.
d. In the automatic operation, turn the adjusting screw clockwise or counter-clockwise as shown in Figure so that the stylus tip will correctly set down on the lead-in groove of the record.

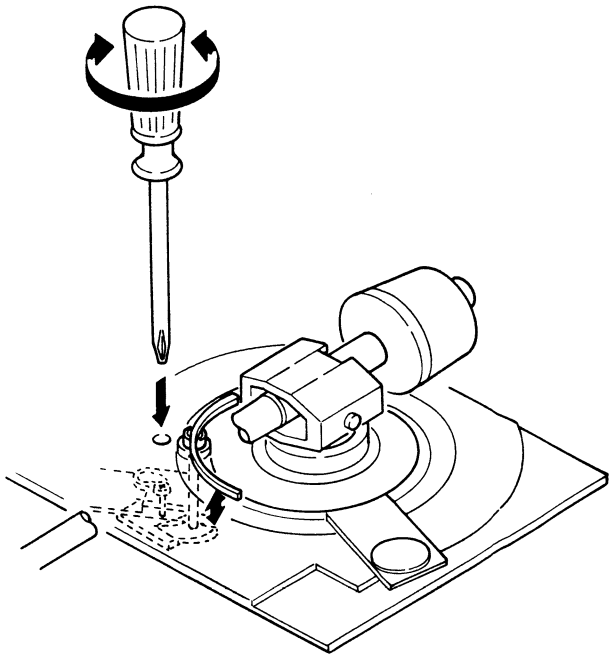


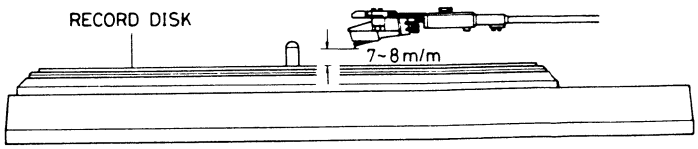
NOTES:
* *If the stylus tip sets down too far inside of the lead-in grooves, turn the adjustment screw clockwise.*
* *If it sets down too far outside of the lead-in grooves, turn it accordingly counter-clockwise. Turning the adjustment screw too far will cause the arm return not to function correctly.*

ADJUSTMENT OF STYLUS HEIGHT

Setting the record disk in place, raise the tonearm lift lever.

Bring the tonearm to above the disk, and insert a screw-driver into the "stylus height adjust" hole (see drawing for ADJUSTMENT OF AUTO-RETURN) and turn it right or left until the distance between the disk and stylus becomes 7 to 8 mm.

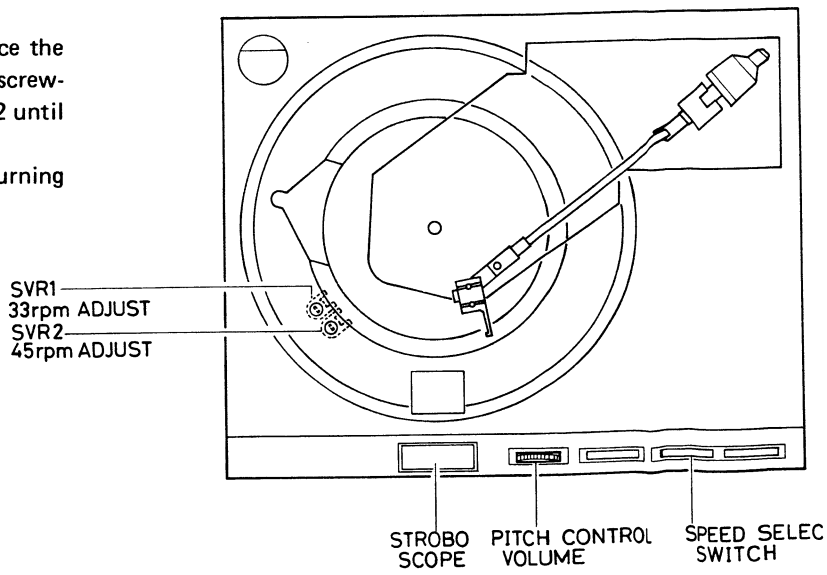


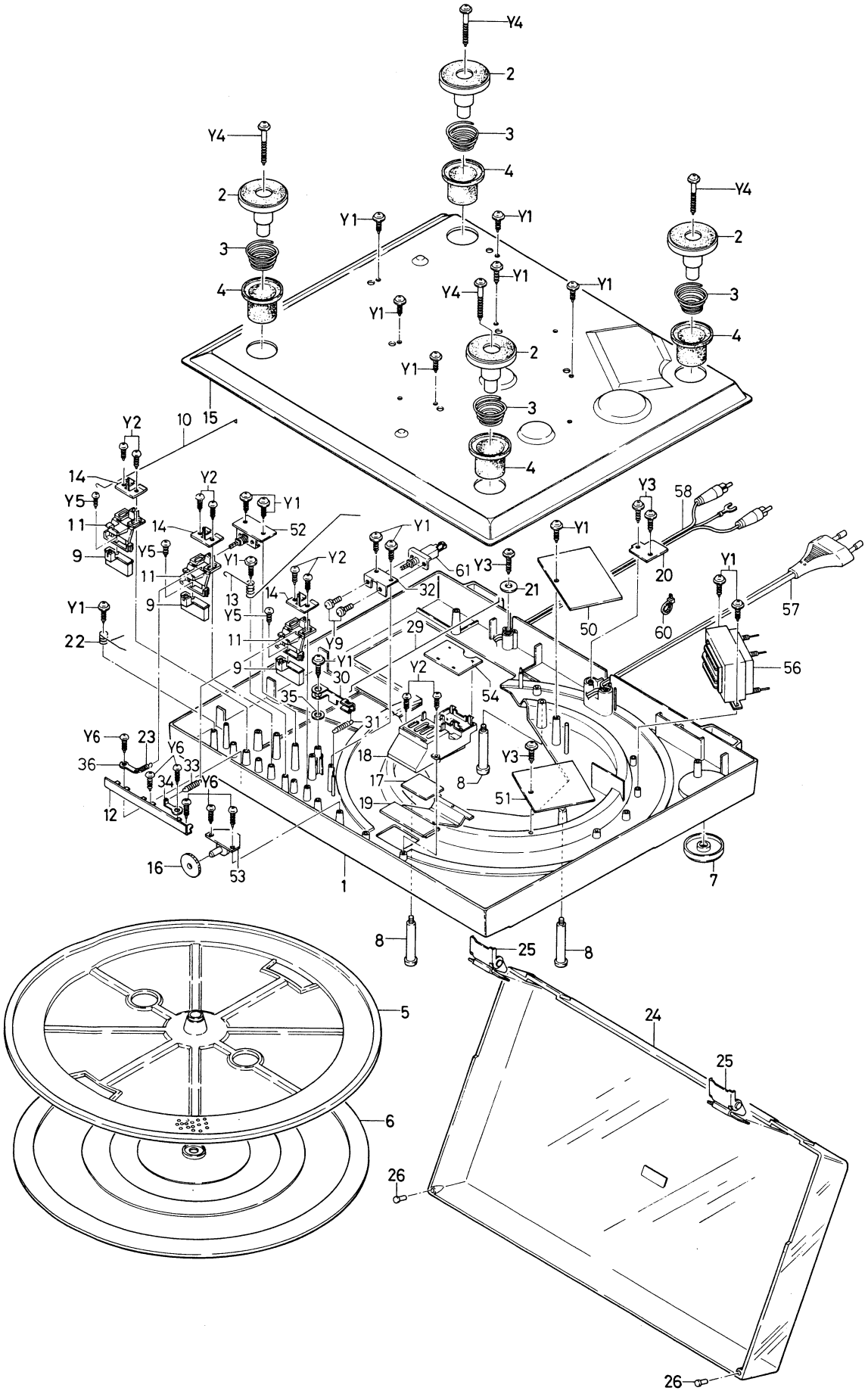


ADJUSTMENT OF TURNTABLE SPEED

Setting the pitch control in the middle position, place the speed select switch in the 45 rpm position. Insert a screw-driver from the bottom of deck panel and turn SVR2 until the stroboscope pattern appears dead.

Similarly, change to 33 rpm position, and adjust by turning SVR1.




Y4
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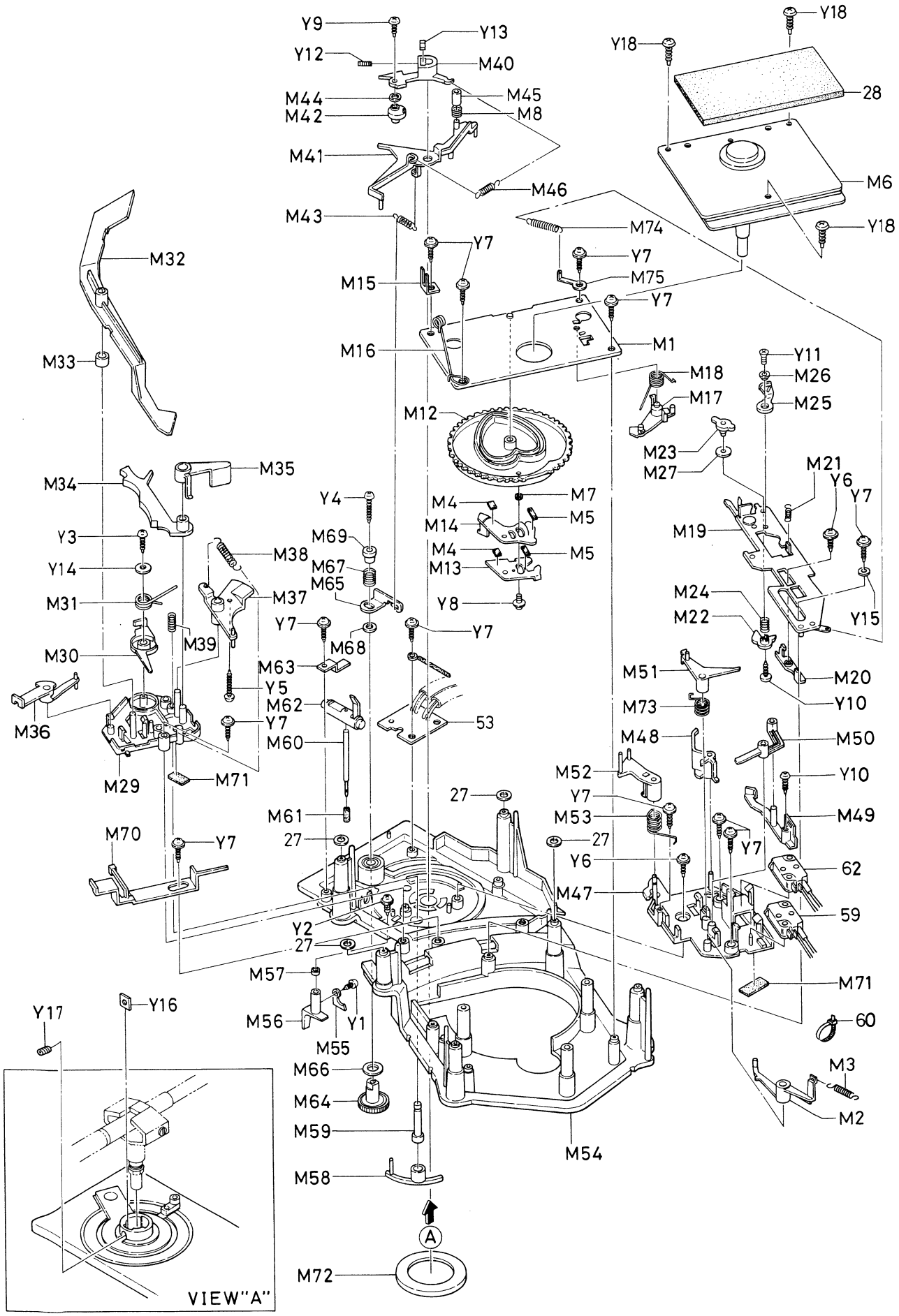
PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKING			
	141-6-133T-27502	Individual Carton	1
	141-6-144T-74600	Foam Plastic Case, L	1
	141-6-144T-74601	Foam Plastic Case, R	1
	141-6-317T-40800	Pad, Top	1
	141-6-316T-88500	Pad, Dust Cover	1
	141-6-317T-06700	Pad, Turntable	1
	141-6-317T-23100	Pad, Set Side	2
	141-6-231T-15250	Inner Polye Cover, Cords	1
	141-6-231T-10100	Inner Polye Cover, Accessory	4
	141-6-231T-35400	Inner Polye Cover, Turntable	1
	141-6-231T-60700	Inner Polye Cover, Set	1
	141-6-317T-45200	Pad, Left Side of Set	1
ACCESSORY			
	141-6-410T-70300	Instruction Manual	1
CABINET & CHASSIS			
1	141-0-121T-16805	Deck Panel Ass'y	1
2	141-0-174T-12300	Stand Ass'y	4
3	141-2-855T-93500	Spring Coil	4
4	141-2-445T-27300	Rubber Cushion	4
5	141-2-118T-01800	Turntable	1
6	141-2-246T-88901	Sheet	1
7	141-2-352T-52500	Spacer, 45 rpm Adaptor	1
8	141-2-421T-33200	Special Screw	3
9	141-2-161T-93701	Push Button	3
10	141-2-852T-71800	Spring Wire	1
11	141-2-210T-31500	Bracket	3
12	141-2-465T-20500	Stopper	1
13	141-2-852T-71900	Spring Wire	1
14	141-2-352T-55700	Spacer	3
15	141-2-125T-24200	Bottom Lid	1
16	141-2-163T-80600	Rotary Knob	1
17	141-2-863T-00800	Mirror	1
18	141-2-210T-35900	Bracket	1
19	141-2-131T-30800	Clear Window	1
20	141-2-453T-70000	Washer	1
21	123-2-453R-10500	Plastic Washer	1
22	141-2-852T-73400	Spring Wire	1
23	141-2-855T-90200	Spring Coil	1
24	141-0-194T-01600	Dust Cover Ass'y	1
25	141-2-251T-07200	Hinge	2
26	141-2-445T-26600	Rubber Cushion	2
27	141-2-453T-30802	Washer	3
28	141-2-447T-71400	Cushion	1
29	141-2-735T-12100	Rod	1
30	141-2-742T-75100	Lever	1
31	141-2-855T-87500	Spring Coil	1
32	141-2-365T-55800	Bracket Switch	1
33	141-2-855T-96600	Spring Coil	1
34	123-2-472R-00401	Lug	1
35	141-2-453T-30802	Washer	1
36	141-2-472T-05700	Lug	1
HARDWARE			
Y1		Pan Head Tapping Screw W/Washer, 3×8	16
Y2		Pan Head Tapping Screw W/Washer, 3×10	8
Y3		Pan Head Tapping Screw W/Washer, 3×12	2
Y4		Pan Head Tapping Screw W/Washer, 3×25	4
Y5		Pan Head Tapping Screw, 2.6×6	3
Y6		Pan Head Tapping Screw, 3×8	5
Y7		Square Nut, 4	1
Y8		Hexagon Socket Set Screw, 4ϕ	1
Y9		Pan Head Screw W/Spring Washer, 3×6	2
Y10		Pan Hd. Forming Screw, 2.6×8	1

Ref. No.	Part No.	Description	Q'ty
ELECTRICAL PARTS			
55	4-250T-11700	P.C. Board, Output	1
56	4-300T-43900	Power Trans	1
57	4-243T-84971	Power Cord	1
58	4-243T-20800	Lead Cord	1
59	4-231T-61900	Switch (SW2)	1
60	141-2-464T-20600	Fixer	6
61	4-238T-39500	Switch, Repeat	1
62	4-231T-61972	Switch (SW3)	1
AC. POWER PCB ASS'Y			
50	141-4-250T-11500	P.C Board Ass'y, AC Power	1
R2		FP-Carbon Res 6.8K ohm ±5% 1/2W	1
C6	4-223T-12100	Capacitor 0.01μF 400V	1
	141-2-382T-18900	Terminal	2
DC. POWER PCB ASS'Y			
51	141-4-250T-11604	P.C Board Ass'y, DC Power	1
	4-235T-69400	Socket 5P	1
SVR1,2	4-222T-71174	Semifixed Variable Resistor 5K	2
Q1		Transistor 2SD330 or 2SD880	1
D1 ~4		Diode SR1K2 or DS135E	4
D5		Zener Diode GZA18U	1
R1		Solid Res. 820 ohm ±10%1/2W	1
C1		Ceramic Cap 0.01μF 50V +80—20%	1
C2		Electrolytic Cap 330μF 35V	1
C3		Electrolytic Cap 47μF 25V	1
C4		Electrolytic Cap 330μF 25V	1
	4-234T-01771	Fuse 400mA	1
	141-2-381T-04200	Bracket, Fuse	2
C5		Mylar 0.047μF 50V ±20%	1
SPEED CONTROL PCB ASS'Y			
52	141-4-250T-11802	PCB Ass'y, Speed Control	1
SW1	4-238T-39400	Switch	1
PITCH CONTROL PCB ASS'Y			
53	141-4-250T-11902	PCB Ass'y, Pitch Control	1
VR1	4-222T-96200	Variable Resistor	1
STROBO CONTROL PCB ASS'Y			
54	141-4-250T-12000	PCB Ass'y, Strobo	1
	4-612T-07071	Lamp	1
ARM			
101	141-0-743T-07103	Arm Ass'y	1
a	141-2-155T-06400	Ring Knob	1
b	141-0-687T-02600	Weight Ass'y	1
102	141-2-286T-01300	Head Shell	1
103	4-243T-18200	Lead Cord LH	1
104	4-243T-18271	Lead Cord LE	1
105	4-243T-18272	Lead Cord RH	1
106	4-243T-18273	Lead Cord RE	1
107	141-2-421T-23700	Special Screw	2
108	141-2-241T-81000	Stud Nut	2
109	141-2-453T-32200	Washer	2
110	4-157T-02101	Cartride Ass'y (MG-35D)	1
	4-156T-01800	Stylus (ST-35D)	1

MECHANISM EXPLODED VIEW

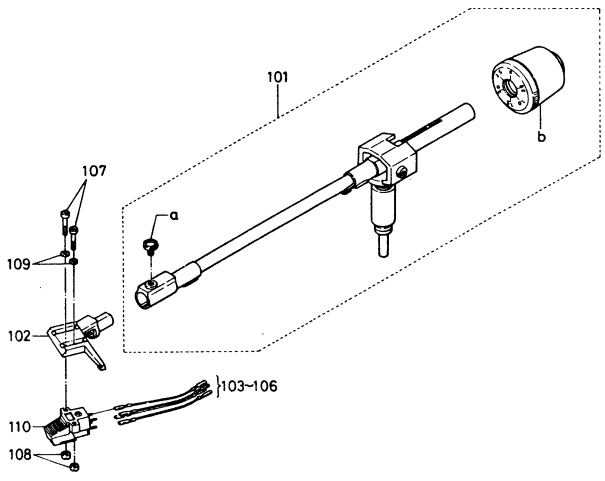


PARTS LIST

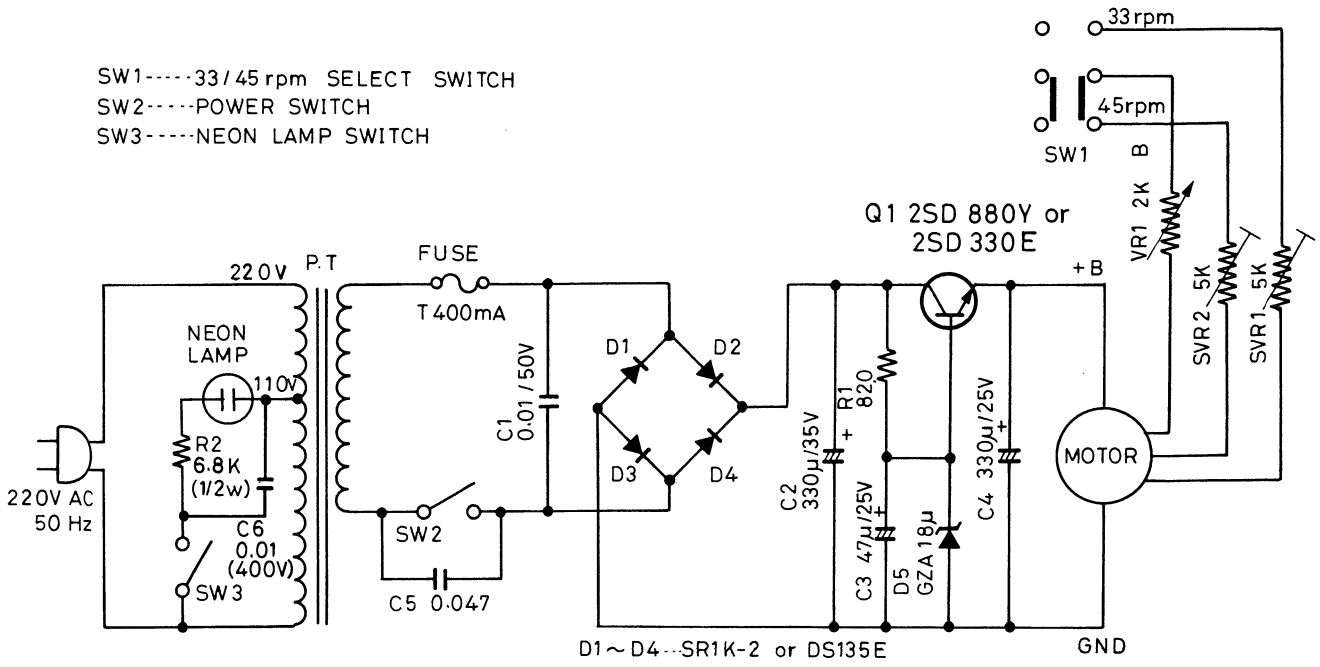
Ref. No.	Part No.	Description	Q'ty
MECHANISM			
M1	141-0-351T-55300	Bracket Mtg. Ass'y	1
M2	141-2-742T-74800	Lever	1
M3	141-2-855T-52700	Spring Coil	1
M4	141-2-352T-56900	Spacer	2
M5	141-2-352T-57000	Spacer	2
M6	4-527T-17700	Motor	1
M7	141-2-461T-42600	Pipe	1
M8	141-2-855T-84600	Spring Coil	1
M12	141-2-581T-21600	Gear	1
M13	141-2-742T-68500	Lever	1
M14	141-2-742T-68600	Lever	1
M15	141-2-382T-07000	Terminal	1
M16	141-2-855T-90500	Spring Coil	1
M17	141-2-742T-68700	Lever	1
M18	141-2-742T-70500	Spring Wire	1
M19	141-0-731T-93600	Slide Ass'y	1
M20	141-2-742T-72200	Lever	1
M21	141-2-855T-84900	Spring Coil	1
M22	141-2-742T-72300	Lever	1
M23	141-2-742T-72400	Lever	1
M24	141-2-855T-85000	Spring Coil	1
M25	141-2-742T-72900	Lever	1
M26	141-2-683T-40300	Ring	1
M27	141-2-453T-30802	Washer 6.2x9.5x0.5 Nylon	1
M29	141-0-210T-32700	Bracket Ass'y	1
M30	141-2-742T-68400	Lever	1
M31	141-2-852T-70600	Spring Wire	1
M32	141-2-742T-06701	Lever	1
M33	141-2-683T-40000	Ring	1
M34	141-2-742T-71500	Lever	1
M35	141-2-742T-71600	Lever	1
M36	141-2-742T-73000	Lever	1
M37	141-2-742T-68800	Lever	1
M38	141-2-855T-87500	Spring Coil	1
M39	141-2-855T-87600	Spring Coil	1
M40	141-2-742T-71700	Lever	1
M41	141-2-742T-71800	Lever	1
M42	141-2-754T-06800	Shaft	1
M43	141-2-855T-52700	Spring Coil	1
M44	141-2-453T-33700	Washer 4.5x7x0.25 Poly.	1
M45	141-2-461T-42300	Pipe	1
M46	141-2-855T-55000	Spring Coil	1
M47	141-2-210T-34800	Bracket	1
M48	141-2-742T-71200	Lever	1
M49	141-2-742T-71300	Lever	1
M50	141-2-742T-71400	Lever	1
M51	141-2-742T-71900	Lever	1
M52	141-2-742T-72100	Lever	1
M53	141-2-855T-85100	Spring Coil	1
M54	141-2-120T-00100	Sub Panel	1
M55	141-2-873T-00700	Rest	1
M56	141-2-873T-00900	Rest	1
M57	141-2-461T-42500	Pipe	1

Ref. No.	Part No.	Description	Q'ty
MECHANISM			
M58	141-2-872T-00700	Lifter	1
M59	141-2-754T-14200	Shaft	1
M60	141-2-742T-67100	Lever	1
M61	141-2-156T-30400	Knob	1
M62	141-2-671T-06300	Cum	1
M63	141-2-853T-74000	Spring Plate	1
M64	141-2-163T-85100	Rotary Knob	1
M65	141-2-742T-08901	Lever	1
M66	141-2-246T-95400	Sheet	1
M67	141-2-855T-86000	Spring Coil	1
M68	141-2-453T-30901	Washer 7.2x11x0.5	1
M69	141-2-683T-26300	Ring	1
M70	141-2-731T-93700	Slide	1
M71	141-6-479T-52900	Label	2
M72	141-2-135T-78400	Cover	1
M73	141-2-852T-74800	Spring Wire	1
M74	141-2-855T-87500	Spring Coil	1
M75	141-2-472R-00600	Lug	1
HARDWARE			
Y1		Pan Head Tapping Screw 2.6x6	1
Y2		Pan Head Tapping Screw 2.6x12	1
Y3		Pan Head Tapping Screw 3x8	1
Y4		Pan Head Tapping Screw 3x14	1
Y5		Pan Head Tapping Screw 3x18	1
Y6		Pan Head Tapping Screw W/Washer 3x6	2
Y7		Pan Head Tapping Screw W/Washer 3x8	12
Y8		Pan Head Forming Screw W/Washer 2.6x6	1
Y9		Baind Head Forming Screw 3x6	1
Y10		Baind Head Tapping Screw 3x6	1
Y11		Flat Head Screw 2.6x4	1
Y12		Hexagon Socket Set Screw 4x4	1
Y13		Hexagon Nut 4	1
Y14		Washer 3ϕx13ϕx1t	1
Y15		Washer 3ϕx5.4ϕx0.13t	1
Y16		Squer Nut 4ϕx6	1
Y17		Headless Screw W/Hexagon	1
Y18		Pan Head Tapping Screw 4x12	3

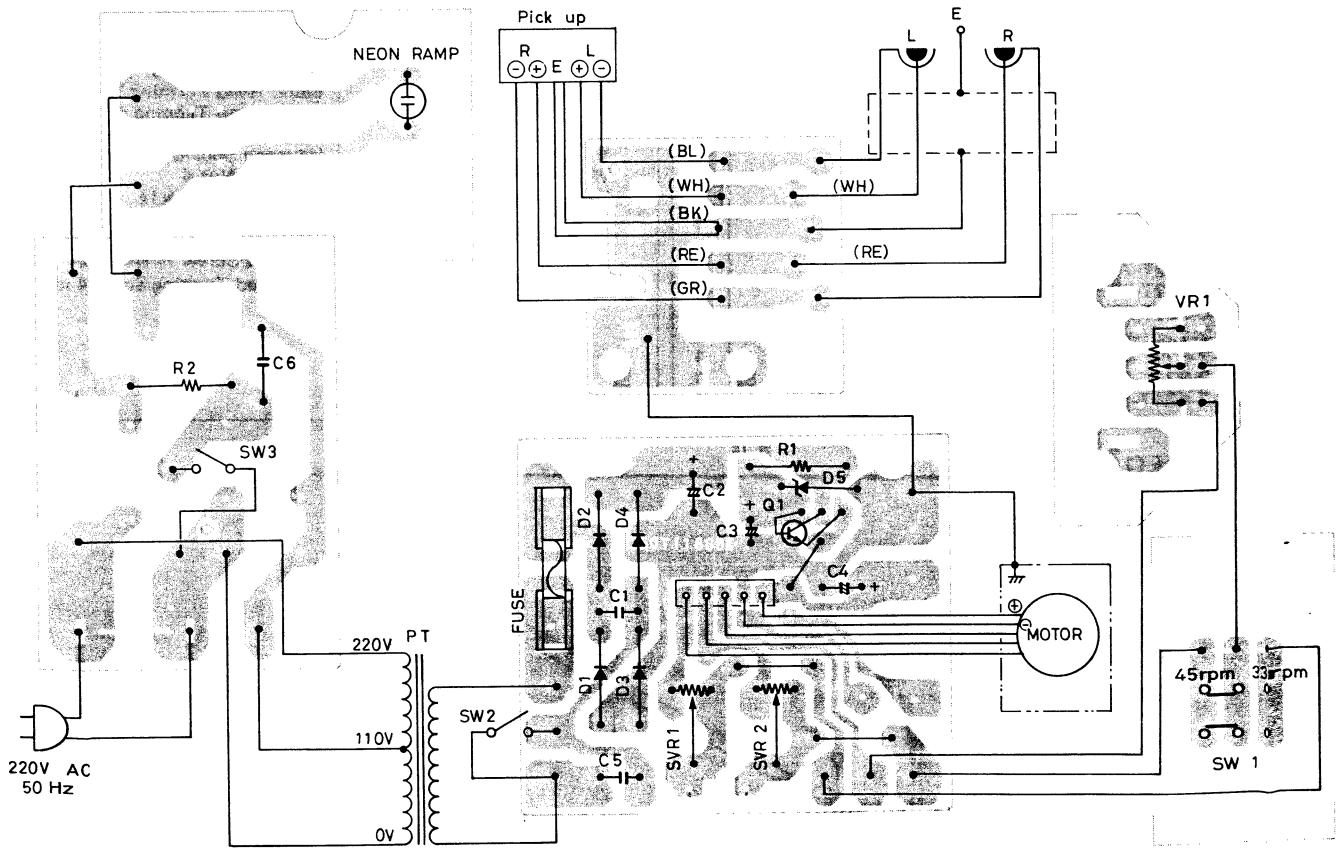
ARM EXPLODED VIEW



SCHEMATIC DIAGRAM



WIRING DIAGRAM



SANYO ELECTRIC TRADING CO., LTD.
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Osaka-fu, 570 JAPAN

Sep./'81/2000 SI Printed in Japan

MODIFICATION NOTICE

STEREO TURNTABLE

SANYO

TP X3	(USA)	WM-6673
TP X3	(EUROPE)	WM-6729
TP X3	(AUSTRALIA)	WM-6779

Date Mar. 9, 1984 Issued by

The following corrections should be made in the SERVICE MANUALS aod PARTS (PRICE) LIST.

		Section	Key No.	Part No.	Description	Q'ty	Remark	Reason
1	From	Arm	108	141-2-241T-81000	Stud Nut			E
	To		"	141-2-417T-18100	"			
2	From							
	To							
3	From							
	To							

INTERCHANGEABLE NOT INTERCHANGEABLE	Serial No. Chassis No.	Effective from
Q'ty of initial production before modification.	Identification of modified unit.	

REASON FOR MODIFICATION

A .....Standardization C .....Improvement of reliadility E .....Misprint G .....

B .....Change of materials D .....Improvement of performance F .....Registration

Printed in Japan 8500

SANYO ELECTRIC TRADING CO., LTD.
OSAKA, JAPAN

WM. 11717